

# **METHOD AND STRUCTURE FOR PROVIDING OPTIMAL DESIGN OF TOLERANCED PARTS IN MANUFACTURING**

## **ABSTRACT**

5           A method and structure for a computerized method for providing an  
optimization solution, includes, for a process, wherein is defined a linear  
functional form  $y = f(X, c)$ , where  $X$  comprises a set of independent variables  $X =$   
 $\{x_1, \dots, x_n\}$ ,  $c$  includes a set of functional parameters  $c = \{c_1, \dots, c_n\}$ , and  $y$  comprises a  
dependent variable, where the independent variables set  $X$  is partitioned into two  
10       subsets,  $X_1$  and  $X_2$ , receiving data for the process and minimizing  $y$  with respect to  
 $X_1$ . Dependent variable  $y$  is maximized with respect to  $X_2$ , subject to a set of  
constraints. The maximizing  $y$  includes a global optimum for the process.

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